

# Effect of interactive lecture versus traditional lecture on nursing students critical thinking dispositions

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**Abstract:** The social milieu that best trains seeing airs is a culture of reasoning climate that strengthens great intuition in an assortment of unequivocal ways. Aim of study: the study aimed to evaluate the effects of interactive lecture versus traditional lecture on nursing students critical thinking dispositions. Subjects and methods: The study was conducted Technical foundation of known which associated to Tanta University. All out number of attendants' understudy's was 252. Two data collection tools were used to carry out this study namely, Knowledge survey sheet, and California Sensitive Seeing Brain Inventory (CCTDI). Results: Marginally under 66% (62.7%) of known understudies in charge gathering, and somewhat under seventy five percent (74.6%) of exploratory gathering had age under 20 years of age with mean time of  $20.04 \pm 1.97$ , and  $20.10 \pm 1.00$  separately. More than one fifth of known understudies in both test, and control bunches separately had palatable degree of all out basic speculation information prior to actualizing diverse place methodologies, with no factual sensitive contrasts between agreeable degrees of the two gatherings prior to executing distinctive place systems. Conclusion and recommendations: There were high measurably essentialness connection be tween's absolute basic reasoning score and score of basic speculation information among known understudies of test bunch intuitive talk. Attendant instructors need to examine educational plan systems, course components, and instructing methodologies to learn if and how these different segments mirror the consolation or block of CTS and manners.

**Keywords:** Interactive lecture, Traditional lecture, nursing students , and critical thinking dispositions.

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## 1. INTRODUCTION

Dynamic learning is an essential part in the learning cycle; the student should be effectively connected with during the talk for compelling figuring out how to occur. There is a developing acknowledgment that, understudies need to accomplish something other than tune in to learn in an evolving climate. Static place is a vital component in the place mind and most grown-up place models see cooperation (static place) as a pivotal part (1).

As expressed by (2), there are numerous new methodologies that have been presented in improving the viability of instructing and place white which incorporates utilizing request place, logical place, piece and dominance place. For as long as quite a while, static place has become an elective alternative to report showing port and got significant consideration.

Fisher (2010) affirmed a reason for concern emerge because of the impediment of the customary study hall in supporting these place draws near. (3) in an ongoing examination guaranteed that, the understudies learn more when static place is

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contrasted with report showing white, (for example, address), paying little heed to the topic. Other than that, the understudies will in general appreciate the class more and ready to hold the data longer. The analysts likewise asserted that static place permits understudies to learn in the homeroom with the assistance of educator and different understudies, as opposed to place all alone.

Static place advances better understanding, maintenance of the subject, explains the questions better, improvement of relational abilities and better reproducibility (4). Studies in training have shown that, static place expanded consideration and inspiration improve memory (5). Collaboration helps understudy commitment in the talk and persuades them emphatically to learn. Static cooperation and inclusion is an essential for place past the review of realities, and improvement in scholastic execution. Additionally, intelligent place through appraisal, assessment, static and blunder adjustment establishes a more grounded place climate than uninvolved guidance (6).

The static place approach will assist understudies with recalling about 70% - 90% of what they have realized, even following fourteen days. This static place approach includes exercises, for example, bunch conversations, introductions, reenactments and mentoring. Conversely, understudies who are just engaged with inactive exercises, for example, addresses, seeing expressions, diagrams and guides can just hold about 10% - 30% of what they had realized (7).

Static place procedures are a successful method for guaranteeing that understudies have open doors for ideal place and development paying little heed to the class size and control (8). Instructional white should advance static place and show understudies how to examine and assess the congruity of data and how to apply the data in different settings and circumstances. Different port that can be utilized in a huge gathering for intelligent educating are: Question Asking and welcoming inquiries, think pair and offer, conceptualizing, case based models, pretending, illustrating, critical port, coordinated tuning in, pre and post testing and so on (9).

Community oriented place works out, delay strategy, think-pair-share, minute papers, pretending, models, workshops, mcq's, case based investigations are some static place systems that can be utilized successfully in enormous homerooms. A preferred position of these systems is that they require little planning. The understudies get time to reflect back, examine in their gatherings and dive further into the material (10).

Input is a fundamental piece of place. Static place permits educators to get criticism on understudy's needs and recognitions, and on future instructing place headings. Input survey with either close, open finished or the two things illuminate the understudies' observation, on the white utilized and furthermore gave an formal to their adapting needs (11).

New alumni helpful attendants of these days are progressively presented to complex helpful services conditions that require the aptitudes to adequately think and motivation to give quality affected consideration. To enough plan known understudies for training in these conditions, the capacity to fundamentally think must be incorporated as a place result in educational program and accreditation norms (12).

Basic deduction in known is aptitude and capacity to utilize, utilization of danger taking innovativeness to settle on a choice and information thus, examination and union that, assessment, to get, data search, to create seeing, as his very own attention mindful reasoning. Known understudies are visual obstructions basic reasoning, regularly respond without deduction, circumstances and logical results relationship doesn't introduce, discernment troubles, not being adaptable, as an exercise in futility to think. Basic believing is to be significant instructive projects significant arranged of the usage and assessment. Basic reasoning and place are interrelated; one must think to pick up information (13).

Basic reasoning includes two components: basic deduction miens notwithstanding aptitudes (14). Sensitive mastermind ought to have the aura and propensity to use basic reasoning capacity bringing about sane and legitimate activity (15).

Basic reasoning mien is characterized as an attention attitude or propensity that outcomes in the creation of self-controlled choices in light of issues and decisions experienced in close to home or expert circumstances (16). Manners recognized in the basic reasoning writing incorporate "enduring uncertainty, ready to suspend judgment, being receptive, curious, and touchy to different thoughts; so, an eagerness to participate in continued basic reasoning" (17).

Basic Seeing airs include seven attributes: truth looking for which means having tendency to look for the best information in a given circumstance, liberality alludes to the inclination to regard the various perspectives on others and think about

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inventive thoughts, compound is the inclination to manage realities and issues in an arranged way, psychological development is the propensity to be wise when settling on choice and the readiness of the trouble of the issue, basic reasoning fearlessness implies having trust in capacity of attention to reason, curiosity alludes to wanting to obtain new data and analyticity which implies the capacity to be ready, dissect encompassing issues and think about possible results of decisions and circumstances (18).

The social milieu that best encourages seeing attitudes is a culture of reasoning climate that fortifies great speculation in an assortment of express ways. The successful program for encouraging reasoning auras ought to make a culture of deduction in the instructive framework. Concerning the intelligent talk; discoveries uncovered that there were huge connections between the known understudies' complete score of CTDs and the known understudies' inclination of the intuitive talk. Intelligent methodology during the addressing strategy energizes understudies' CTDs, during the intuitive talk a blend of instructive white are utilized (19).

**Significance of the study**

Basic reasoning ability is a result of greatness of undergrad known programs (20) (21). To have qualified and experienced helpful attendants, known instructors ought to be certain that understudies are obtained readiness toward usage of their basic deduction capacities to look at encompassing circumstances, resolve issues and settle on sensible choices identified with skilled affected consideration (22).

Subsequently, the basic reasoning manners and place approach of understudy helpful caretakers are of significant worry to nurture instructors since it influences the known training result and expert turn of events. Evaluation for place draws near and basic reasoning are fundamental with the goal for educators to really decide whether these abilities are available and how of them should be additionally evolved.

**Aim of the study**

The aim of this study is to evaluate the effects of interactive lecture versus traditional lecture on nursing students critical thinking dispositions

**2. SUBJECTS AND METHODS****Research design:**

Descriptive research design was used in carrying out the current study.

**Setting:**

This study was conducted at Technical foundation of known which associated to Tanta University. It situated on the third floor of the out affected centers working in University's emergency clinics. The understudies joint to concentrates in specialized organization of known subsequent to getting auxiliary school through Coordination Office. Specialized foundation of known included of two principle Great runway, two innovative labs to PC, a library that incorporates an enormous number of books and references that add to instructive mind, and 9 labs for improvement understudies' abilities.

**Subjects:**

Every one of attendants' understudies who selected second year were qualified to take an interest in the investigation. All out number of attendants' understudy's was 280. 252 helpful attendants understudy product partakes in the investigation while 28 understudies not take an interest for various reasons as marriage, kid care, and referential partake wiped out leave at the scholastic year 2018/2019.

**Data collection tools:**

Two data collection tools were used to carry out this study namely, Knowledge survey sheet, and California Sensitive Seeing Brain Inventory (CCTDI).

**First Tool: Knowledge survey sheet (Appendix I).** This device was proposed to evaluate nurture understudies' information with respect to basic reasoning and intelligent talk systems. It partitioned into two parts:

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**Part I:** This part was proposed to gather information identified with attention qualities of the investigation subjects including age, sexual orientation, conjugal status, positioning among siblings, diversions, gone to seminars on basic reasoning and concentrated in one of the past classes of basic reasoning.

**Part II:** this part created by the scientist dependent on survey of writing Shaban. (2010), Shahn. (2011) and Sultana. Alfaleh. (2017) It comprises of 25 various decision questions concerning territories as definition, significance, benefits, favorable circumstances, disservices impacts.

### Scoring system:

Each question was allotted a score of (one) if right answer and (zero) if erroneous answer. Most extreme score was 25. Mean and standard deviation was determined and afterward changed over into percent score. The information was viewed as palatable if percent score was 60% or more and inadmissible if under 60%.

### Second Tool: California Sensitive Seeing Brain Inventory (CCTDI) (Appendix11).

It was a Self-regulated instrument which intended to evaluate known understudy's basic reasoning manners. It isolated into two parts:

**Part I:** This part was expected to gather information identified with attention qualities of the investigation subjects including age, sexual orientation, conjugal status, positioning among siblings, pastimes, gone to seminars on basic reasoning and concentrated in one of the past classes of basic reasoning.

**Part II:** this part created by Facione (2006) and adjusted from Ragab (2015). It comprises of 75 things assembled into seven brainal qualities as follow:

Reactions were scored on a 5-point likert scale going from unequivocally consents to emphatically oppose this idea. This scored separately from '5' to '1'. So a higher score reflects higher manner towards basic reasoning. All out score over 280 demonstrates a positive tendency, i.e., high basic reasoning score, while lower scores show solid resistance toward basic reasoning, i.e., low basic reasoning scores. Subscale scores over 40 demonstrate a positive tendency, i.e., high subscale scores, and scores under 40 show a solid resistance toward basic reasoning, i.e., low subscale scores (Facione et al., 2001)

### Tools validity:

Devices were approved by a gathering of specialists. This gathering comprised of nine known workforce staff from various resources of known and one aide teacher from school of instruction Tanta University, and school of training; Two Assistant teacher of known organization, ; One Assistant educator of mental known and emotional wellness from Menofya University, Two teacher from Ain tricks University, One Assistant educator from school of instruction Tanta University, One Assistant educator strength basic office from Cairo University, and two instructor had practical experience in basic speculation course in Cairo University. Jury bunch attentions made a decision about the apparatuses for its extensiveness, exactness, and lucidity. In light of their conclusions revision; expansion or potentially oversight of certain things were finished.

### Fieldwork:

Once official permissions were obtained, the fieldwork was started. The researcher met with the director of the mentioned setting to determine the suitable time to collect the data and confirm the days and times to evaluate the effects of interactive lecture versus traditional lecture on nursing student's critical thinking dispositions. The study was carried out through to evaluate nursing student's critical thinking dispositions. The researcher collected Knowledge survey sheet, and California Sensitive Seeing Brain Inventory (CCTDI) took from 30:45 minutes.

### Administrative Design:

An approval to conduct the study was obtained from the Faculty of Nursing at Ain-Shams University, and from Technical foundation of known which associated to Tanta University

**Ethical Considerations:**

Prior study conduction, ethical approval was obtained from the scientific research ethical committee of the faculty of nursing, Ain Shams University. The researcher met directors of Technical foundation of known which associated to Tanta University to clarify the aim of the study and take their approval. The researcher also met the study subjects to explain the purpose of the study and to obtain their approval to participate. They were reassured about the anonymity and confidentiality of the collected data, which was used only for the purpose of scientific research. The subjects' right to withdraw from the study at any time was assured.

**Statistical analysis:**

Data entry and statistical analysis were done using (SPSS) statistical software package. Quality control was at the stage of coding and data entry. Data were presented using descriptive statistics in the form of frequencies and percentage for qualitative variables; mean and standard deviation for quantitative variable. Qualitative categorical variables were compared Chi-square (X<sup>2</sup>) test; the hypothesis that the row and column variables are independent, without indicating strength or direction of the relationship, Analysis of variance (ANOVA) test. Statistical significance was considered at (P-value <0.05).

**3. RESULTS**

Table 1 shows that, slightly less than two thirds (62.7%) of nursing students in control group, and slightly less than three quarters (74.6%) of experimental group had age less than 20 years old with mean age of 20.04±1.97, and 20.10±1.00 respectively. Moreover, slightly more than two thirds (69.8%), (68.3%) of nursing students in both group was female respectively. Also, majority of nursing students respectively in both group were single, and was from rural area. In addition, slightly more than two fifths (42.9%) of nursing students in control group was the middle brother, while slightly more than one thirds (38.9%), of experimental group was the oldest brother respectively. Furthermore, more than three quarters (78.6%) of nursing students in both group respectively had hobbies. Finally, less than three quarters (71.4%) of nursing students in control group, and majority (82.5%) experimental group didn't attend training programs related to critical thinking respectively, while more than three quarters (74.6%), (83.3%) of nursing students in both group didn't attend previous classes related to critical thinking respectively.

Table (2) illustrates that, there is a statistically significant difference between the experimental and control group regarding Critical thinking knowledge mean score

Table (3) clears that, illustrates that, there is a statistically significant difference between the experimental and control group regarding total knowledge mean score

Table (4) shows that, at immediate post learning strategies phase the mean score of open-mindedness disposition increased markedly among interactive learning group, (52.52±9.83), while didn't increase markedly among traditional learning group (30.95±5.99) respectively. While, the self – confidence had the lowest mean score (42.15±5.00, 23.81±5.02) among both groups respectively. Furthermore, there was markedly improvement in the total critical thinking mean score among interactive learning group (333.56±51.99), compared to no improvement among traditional learning group (187.84±25.86) respectively. Also, there were highly statistically significant differences between all critical thinking dispositions among both groups in this phase.

Table (5) reveals that, there is a highly statistically significant difference between the experimental and control group regarding critical thinking scores

Table (6) represents that, there were statistically significance relation between interactive lectures level regarding critical thinking, and their gender, attending training program or workshops, and attending previous classes of critical thinking at (posttest) phase, while there was no statistically significance relation between traditional lecture level regarding critical thinking, and their personal and professional characteristics at (posttest) phase.

Table (1): Personal and professional characteristics of the study sample (n= 252).

Items	Nursing students			
	Control group n=126		Experimental group n=126	
	Frequency	Percent	Frequency	Percent
<b>Age (in Years)</b>				
< 20	79	62.7	94	74.6
≥20	47	37.3	32	25.4
<b>Mean ± SD</b>	20.04±1.97		20.10±1.00	
<b>Range</b>	18-23		18-23	
<b>Gender</b>				
Male	38	30.2	40	31.7
Female	88	69.8	86	68.3
<b>Marital status</b>				
Single	121	96.0	118	93.7
Married	5	4.0	8	6.3
<b>Residence area</b>				
Rural	90	71.4	106	84.1
Urban	36	28.6	20	15.9
<b>Rank among brother</b>				
Youngest brother	24	19.0	36	28.6
Middle brother	54	42.9	41	32.5
Oldest brother	48	38.1	49	38.9
<b>Hobbies</b>				
Yes	99	78.6	99	78.6
No	27	21.4	27	21.4
<b>Attending Training programs about critical thinking</b>				
Yes	36	28.6	22	17.5
No	90	71.4	104	82.5
<b>Attending Previous classes of critical thinking</b>				
Yes	32	25.4	21	16.7
No	94	74.6	105	83.3

Table (2): Comparison between two study groups regarding total critical thinking knowledge mean score (n= 252).

	Nursing students'		X <sup>2</sup>	P
	Experimental n=126	Control group n=126		
	Mean± SD	Mean± SD		
<b>Critical thinking knowledge mean score</b>	22.05±3.88	8.79±4.70	23.20	<0.001**

Table (3): Total Critical thinking knowledge among two nursing students' groups (n= 252).

	Nursing students				X <sup>2</sup>	P
	Experimental n=126		Control n=126			
	NO	Percent	NO	Percent		
<b>Total satisfactory knowledge 60%+</b>	112	88.9	34	27.0	99.07	<0.001**

(\*) Statistically significant at p<0.05

(\*\*) High Significant at P < 0.01

Table (4): Nursing students mean scores regarding critical thinking dimensions (n= 252).

Critical thinking disposition	Nursing students'		T test	P
	Experimental groups (Interactive lecture) n=126	Control groups (Traditional lecture) n=126		
	Mean±SD	Mean±SD		
<i>Truth Seeking</i>	50.35±10.73	28.60±7.04	19.02	< 0.01**
<i>Analyticity</i>	47.66±9.94	26.48± 5.20	22.50	< 0.01**
<i>Systematicity</i>	50.12±6.74	27.46±4.95	29.56	< 0.01**
<i>Self – confidence</i>	42.15±5.00	23.81±5.02	30.32	< 0.01**
<i>Inquisitiveness</i>	45.81±6.33	25.34±5.50	27.37	< 0.01**
<i>Open-mindedness</i>	52.52±9.83	30.95±5.99	21.03	< 0.01**
<i>Maturity</i>	44.92±7.33	25.15±4.84	25.24	< 0.01**
<i>Total critical thinking</i>	333.56±51.99	187.84±25.86	28.88	< 0.01**

(\*) Statistically significant at p<0.05

(\*\*) High Significant at P < 0.01

Table (5): Comparison between two nursing students' groups regarding critical thinking scores (n=252)

Critical thinking scores	Nursing students				X <sup>2</sup>
	Interactive lecture n=126		Traditional lecture n=126		
	NO	%	NO	%	
<i>Truth seeking</i>	111	88.1	35	27.8	90.05 < 0.01**
<i>Analyticity</i>	114	90.5	33	26.2	107.1 < 0.01**
<i>Systematicity</i>	118	93.7	40	31.7	103.2 < 0.01**
<i>Self-co nfidence</i>	119	94.4	55	43.7	76.05 < 0.01**
<i>Inquisitiveness</i>	120	94.4	47	37.3	93.51 < 0.01**
<i>Open-mindedness</i>	119	94.4	45	35.7	102.0 < 0.01**
<i>Maturity</i>	116	92.1	40	31.7	99.38 < 0.01**
<i>Critical thinking</i>	116	92.1	37	29.4	106.1 < 0.01**

(\*) Statistically significant at p<0.05

(\*\*) High Significant at P < 0.01

Table (6): Relation between interactive lecture, traditional lecture regarding critical thinking and their personal & professional characteristics (posttest):

Demographic characteristics		Total critical thinking of interactive lecture		T test	P	Total critical thinking of traditional lecture		T test	P
		No 126	Mean ± SD			No 126	Mean ± SD		
Age (in Years)	≤ 20	79	335.19±48.52	0.454	>0.05	94	189.37±26.47	1.14	>0.05
	<20	47	330.83±57.79			32	1.8334E2±23.81733		
Gender	Male	38	347.68±42.17	2.03	<0.05*	40	188.20±24.61	0.106	>0.05
	Female	88	327.47±54.79			86	187.67±26.56		

<b>Marital status</b>	Single	121	332.08±52.52	1.58	>0.05	118	187.30±25.22	0.907	>0.05
	Married	5	369.40±6.10			8	195.88±35.10		
<b>Training programs or workshops</b>	Yes	36	351.17±20.59	2.45	< 0.01**	22	189.80±25.80	1.85	>0.05
	No	90	326.52±58.77			104	178.59±24.67		
<b>Previous classes of critical thinking</b>	Yes	32	353.12±21.14	2.52	< 0.01**	21	188.45±25.70	0.587	>0.05
	No	94	326.90±57.51			105	184.81±27.11		

(\*) Statistically significant at  $p < 0.05$  (\*\*) High Significant at  $P < 0.01$

#### 4. DISCUSSION

Helpful caretaker instructors have the test of giving understudies schooling that sets them up for the future commercial center. Basic reasoning is an esteemed instructive result. Accordingly, nurture teachers concur that basic reasoning is a fundamental part and basic competency for the expert helpful attendant in the present consistently changing helpful care climate. The viable program for showing seeing, manners, in this way, ought to make a culture of intuition in the instructive framework (El-Demerdash et al, 2011).

The current indicated that, more than one fifth of known understudies in both test, and control bunches attentional had good degree of absolute basic intuition information prior to executing distinctive place procedures. In a similar line with the investigation discovering Tumkaya (2011) who detailed that, the degree of basic reasoning aura information was discovered to be low. The aftereffect of the investigation led by Kucuk and Uzun (2013) exhibited that, the pre-administration music instructors had low degree of basic reasoning mien information all in all.

The current study was supported by Saglam and Buyukuysal (2013) who inferred that, the basic seeing levels about the understudies in the most recent year of the division of Turkish Education and Primary School Teaching in the Faculty of Education were low as a rule. From the specialist perspective, this outcome might be because of the utilization of report white among known instruction, additionally there are various segments of basic reasoning (CT) associated with the advancement of esteemed instructive procedures. Instructive procedures that advance CTDs are never straightforward and require cautious arranging.

Likewise, the outcome demonstrated that, there was no measurably huge contrast between basic reasoning acceptable degrees of the two gatherings prior to actualizing diverse place methodologies. This finding might be because of instruction given in the known school didn't contribute as a lot to the degree of basic reasoning. This examination finding is harmonious with Mohammad et al., (2016) who revealed that, there was no measurably huge contrast between basic considering both intercession and the benchmark groups toward the start of the semester (before the talk part of their course).

This finding goes in a similar line with Choi et al., (2015) who revealed that the there was no factually huge contrast between basic considering both the intercession and the benchmark groups prior to executing the program. This finding might be expected to due the absence of the necessary norms for the advancement of basic reasoning, guidelines, for example, the place climate in the homeroom.

The consequences of present examination noticed that, there was no factually importance connection between intuitive talks' degree of information with respect to basic reasoning, and their own and expert attributes all through program stages. This outcome might be because of known understudies attention and expert attributes would not represent contrasts of basic reasoning information level, in light of the fact that basic reasoning are perspectives that created over the long haul and are affected by the climate, accepted practices, and friends.

In consistence with the examination discovering Shirazi and Heidari, (2019) indicated that, there was no connection between basic reasoning and either age or conjugal status. Additionally, Mahmoud and Mohamed, (2017) expressed that, none of the attention employment qualities demonstrated factually huge relations with the complete basic reasoning. Be that as it may, Azodi et al., (2010) study indicated a positive connection among age and basic reasoning.



While, there were exceptionally factually sensitiveness connection between customary talks' degree of information with respect to basic reasoning and their sexual orientation all through program stages. This outcome might be demonstrating that sexual orientation factors give off an impression of being key determinants of known understudies' information with respect to basic reasoning.

In concurrences with the investigation discovering Wangenstein et al., (2010) showed a few contrasts between helpful attendants' basic deduction miens as to foundation factors sex. In conflicts with the investigation discovering Miller et al., (2011).

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